

CLAIMS

1. Pockels cell with two successive parallelepiped RTP crystals (6, 7) that are oriented in the direction of radiation (5) for thermal compensation to one another, that are arranged spaced from one another, and that have a rectangular cross-section, of which each is provided with electrodes (8, 9) on two opposing surfaces, whereby said surfaces of said one crystal are rotated by 90° to those of said other crystal with respect to said direction of radiation (5), characterized in that the exterior sides of said electrodes (8, 9) are provided with flexible, electrically insulating, high voltage-proof plastic mats (10) that conduct heat well and in that these are adjacent to the interior side (12) of a cooling body (13A, 13B).
2. Pockels cell in accordance with claim 1, characterized in that said cooling body (13A, 13b) comprises two half shells that can be joined securely to one another at their separation surface (15) while leaving free the receiving region (14) for said two crystals (6, 7) surrounded with said plastic mats (10).
3. Pockels cell in accordance with claim 1 or 2, characterized in that said receiving region (14) of each half shell has two planar support surfaces (16, 17) that are at a right angle to one another and that extend parallel to said direction of radiation (5), of which [support surfaces] said one faces one electrode and said other faces an electrode-free surface of said crystal.
4. Pockels cell in accordance with any of claims 1 through 3, characterized in that said cooling body is provided with cooling channels that run parallel to said direction of radiation, that each have a channel axis, that have the same diameter, that are the same distance from said separation surface, and that are twice that distance from one another, for a coolant.
5. Pockels cell in accordance with claim 4, characterized in that each half shell of said cooling body is provided with two cooling channels.

6. Pockels cell in accordance with claim 5, characterized in that said channel axis of each associated cooling channel is arranged equidistant in the mid-perpendicular plane formed by all mid-perpendiculars of each support surface.
7. Pockels cell in accordance with any of claims 1 through 6, characterized in that cooling channels that are adjacent to one another are embodied for the coolant to flow in opposing directions.
8. Pockels cell in accordance with any of claims 1 through 7, characterized in that said cooling body contains copper.
9. Pockels cell in accordance with any of claims 1 through 8, characterized in that both half shells are embodied identically, preferably form [sic] said cooling body that is column-shaped overall.
10. Pockels cell in accordance with claim 1, characterized in that said plastic mat contacts said electrode preferably by means of an adhesive that conducts heat well.
11. Pockels cell in accordance with claim 1 or 10, characterized in that said plastic mat contacts said support surface of said cooling body preferably by affixing using adhesive.
12. Pockels cell in accordance with claim 11, characterized in that said plastic mat is affixed to said support surfaces of said cooling body by means of a double-sided electrically insulating, and electrically high voltage-proof adhesive tape that conducts heat well.
13. Pockels cell in accordance with any of claims 1 through 12, characterized in that said plastic mats are also adjacent to the electrode-free sides of said crystal.
14. Pockels cell in accordance with claim 1, characterized in that two electrodes are provided for said two crystals.

15. Pockels cell in accordance with claim 14, characterized in that said two electrodes are embodied identical.
16. Pockels cell in accordance with claim 15, characterized in that said electrodes are formed from an angle section of an electrical conductor, preferably made of a metal.
17. Pockels cell in accordance with claim 16, characterized in that each of said two electrodes comprises two parts that are point-symmetrical with respect to a point of symmetry and that are rotated 90° relative to one another about said axis of symmetry running parallel to said direction of radiation through said point of symmetry.
18. Pockels cell in accordance with claim 17, characterized in that the electrical connector for said two electrodes is insulated by each half-shell and passes through parallel to its separation surface.
19. Pockels cell in accordance with claim 18, characterized in that said electrical connector is arranged in the region of the free space between said two crystals.
20. Pockels cell in accordance with claim 19, characterized in that in said column-shaped cooling body with respect to its plane of symmetry running parallel to the bottom side and the top side arranged parallel thereto said crystals are arranged in mirror symmetry and as required rotated 90° to one another.